



U.S. Fish & Wildlife Service

Accomplishment Report

The **Alpena Fishery Resources Office (FRO)** is located in Alpena, Michigan and works to meet U.S. Fish and Wildlife Service Fishery and Ecosystem goals within Lake Huron, Western Lake Erie, and connecting waters of the St. Marys River, St. Clair River, and Detroit River. Activities include Aquatic Species Conservation and Management, Aquatic Habitat Conservation and Management, Cooperation with Native Americans, Leadership in Science and Technology, Partnerships and Accountability, Public Use, and Workforce Management – all of which are conducted in alignment with the Service Fisheries Program Vision for the Future. The station is one of many field offices located within Region 3, the Great Lakes Big Rivers Region.

Aquatic Species Conservation and Management

Alpena FRO Completes 2005 Mid-lake Lake Trout Survey

*Submitted by Aaron Woldt
Fishery Biologist*

From October 13-14 staff from the Alpena Fishery Resources Office (FRO) completed a mid-lake lake trout spawning survey on Yankee Reef. The spawning survey at Six Fathom Bank was called off due to persistent inclement weather from October 15-31. Service staff involved included 1836 Treaty unit coordinator Aaron Woldt, Project Leader Jerry McClain, fishery biologist Adam Kowalski, and fishery biologist Scott Koproski. The 2005 survey was completed using the MV Togue and crew—Captain Mike Perry and Engineer Bob Bergstrom.



The goal of this survey is to collect abundance and biological data of spawning lake trout at index stations at two mid-lake reef complexes. The Service has stocked hundreds of thousands of lake trout yearlings on these 2 off-shore reefs in recent years. Two 400' long, large-mesh gill nets were set on Yankee Reef for one night. All lake trout collected were measured for length, weighed, checked for lamprey wounds, sexed, assessed for maturity and visceral fat content, and sampled for ageing structures. Non-target fish species were worked up in a similar manner as well. The Alpena FRO has conducted the annual mid-lake lake trout spawning surveys on these reefs since 1993 with the M/V Togue.

In 2005, catch rates declined to an all time low at Yankee Reef. Total catch rates were down 67%, and catch rates at the north and south Yankee Reef sites were down 85% and 54% respectively compared to 2004 data. In 2004 catch rates were above 100 spawners/1,000 feet of net at both Yankee Reef sites, but in 2005 catch rates were 15 spawners/1,000 at the north site and 65 spawners/1,000 feet at the south site. 50 spawners/1000 feet of net is the mean abundance of spawners needed to support a viable, naturally reproducing lake trout population at other sites in the Great Lakes. Also, no unclipped, presumably wild adult lake trout were captured at Yankee Reef in 2005. This is a departure from 2004 when unclipped fish were sampled at each of the 5 mid-lake sites and 13% of Yankee Reef fish sampled were unclipped. Low 2005 catch rates at Yankee Reef may indicate decreases in spawner abundance on this important off shore complex; however, low 2005 catch rates may also be due to warmer than normal air and water temperatures that delayed arrival of spawning fish. Also due to poor weather, we fished the 2005 Yankee Reef survey 17 days earlier than in 2004. This difference in timing may account for some of the difference between 2004 and 2005.

Monitoring the abundance, stability, and quality of spawning lake trout populations on Six Fathom Bank and Yankee Reef is an important index of lake trout rehabilitation in Lake Huron. Six Fathom Bank and Yankee Reef were historically important lake trout spawning sites. This outcome is consistent with the Service's goal of maintaining self-sustaining populations of native fish species under the "Aquatic Species Conservation and Management" priority of the Fisheries Program Vision for the Future.

Fall Netting Targeting Eurasian Ruffe – Turns Up None

*Submitted by Anjanette Bowen
Fishery Biologist*

An annual fall netting survey targeting Eurasian ruffe (ruffe) in the only known location in Lake Huron, the Thunder Bay River - has caught none for the 3rd year in a row. The Eurasian ruffe is an invasive fish species that was first found in the Great Lakes from Lake Superior in the 1980's. They are believed to have been accidentally transported to the Great Lakes from their native land of Eurasia in the ballast water of an ocean going ship. Ruffe were found in Lake Huron in the Thunder Bay River in Alpena, Michigan in 1995. Ruffe were also found in Lake Michigan in 2002.



The abundance of ruffe in the Thunder Bay River slowly increased until their numbers reached an all time high in 1999 when they were the most abundant bottom dwelling fish captured during fall trawling surveys. In 2002 the Alpena FRO initiated a spring netting survey to remove adult

spawning ruffe from the river prior to spawning. Ruffe were captured in the spring and fall of 2002 and spring of 2003 but have not been captured since.

It is believed that Eurasian ruffe may have become extirpated from the Thunder Bay area and Lake Huron based on survey findings from 2003 to present. The possible extirpation of ruffe is a remarkable outcome considering established invasive species generally become a part of the fish community into the future. Invasive species monitoring is consistent with the Aquatic Species Conservation and Management priority of the Service's Fisheries Program Vision for the Future.

Aquatic Habitat Conservation and Management

Fish Passage Improvement on the Little Ocqueoc River

*Submitted by Susan Wells
Fishery Biologist*

On October 24, the Presque Isle County Road Commission completed a culvert replacement at the Silver Creek road crossing on the Little Ocqueoc River in Northern Lower Michigan. The project identified two undersized and perched culverts that negatively impacted native brook trout passage in the Ocqueoc River Watershed. In addition to impeding fish movement, the aging and undersized culverts contributed to large amounts of sediment entering the



system during high water events when the water was backed up by the small culverts and would flood the gravel road. The project was completed by replacing the failing culverts with a bottomless culvert constructed from a railroad tanker car. This design was utilized to reduce cost, provide durability and allow for unimpeded fish access to habitat upstream. Replacement of the culvert will decrease the sediment load entering the system and improve fish habitat. Oversight for the project during construction was provided by Alpena FRO Biologist Wells and Kris Bruestle from Huron Pines RC&D. Funding for this project was provided by the Region 3 Fish Passage Program, the Presque Isle County Road Commission, and Huron Pines RC&D.

This is an example of collaboration between federal, state and local governments and watershed groups to enhance aquatic habitat which will benefit fish and wildlife resources including native brook trout. This project involved collaboration between many partners and addresses the Service's Fisheries Program Vision for the Future priority of Aquatic Habitat Conservation and Management.

Partnerships and Accountability

Service Honored With "Outstanding Agency Partner" Award

*Submitted by Heather Rawlings
Fish and Wildlife Biologist*

Biologists Heather Rawlings and Stewart Cogswell (Green Bay FRO), and Project Leader Craig Czarnecki (East Lansing FO) were honored on October 7, 2005 to receive the "Outstanding Agency Partner" award from the Conservation Resource Alliance (CRA). CRA is a non-profit Resource, Conservation & Development office located in Traverse City, MI. CRA works in the NW Lower Peninsula



of Michigan to improve the natural resources of the area through the creation of partnerships to actively restore habitat and educate the general public and local policy-makers. The Service has funded CRA's projects through the Partners for Fish and Wildlife, Fish Habitat Restoration, Coastal and Fish Passage Program's. The Service greatly appreciates our partnership with CRA, and will continue to work with CRA to restore riverine, riparian, and upland habitats for the betterment of our natural resources in NW Michigan. Native brook trout are the dominate fish in these coldwater ecosystems, and are the fish that will benefit from this in-stream and riparian work.

Completion of aquatic habitat restoration projects contribute toward the "Aquatic Habitat Conservation and Management" and "Partnerships and Accountability" components of the Service's Fisheries Program Vision for the Future.

Listed Species Found on Refuge Lands in Western Lake Erie

*Submitted by James Boase
Fishery Biologist*

As part of the Service's Challenge Cost Share Grant Program (CCS) biologists from Alpena FRO and Michigan DNR Lake Erie Management Unit teamed up to conduct the first fishery survey within the recently established Detroit River International Wildlife Refuge (Refuge). The Refuge boundary includes Michigan waters of the Lower Detroit River and Lake Erie. The last time a fishery survey was conducted in that area of the Great Lakes was back in the early 1980's. Since that time many changes have taken place, specifically the addition of exotic species that have likely displaced or reduced the numbers and diversity of native species.

Our goal with this pilot project was to provide baseline information about what species, both native and exotic, are found within the Refuge. The Refuge provides some of the last remaining natural wetland areas available in the Detroit River and Western Lake Erie. Those nursery areas are critical to the early life stages of many species of sport fish as well as some state listed species. Historical records from past surveys had identified over thirty species of fish using those wetland habitats for either spawning or nursery areas.



During the early planning stages (February 2005) members from Michigan DNR (Gary Towns, Joe Robison, and Jim Francis) and the Service (John Hartig and Jim Boase) identified eight areas located along the western shoreline of Lake Erie that still had relatively large expanses of intact soft shorelines and were identified as important for fish and wildlife. Unfortunately only five areas could be sampled in 2005 but plans are to finish the remaining three areas in Lake Erie and then add additional locations located in the Detroit River in 2006.

Historical records indicated that the near-shore areas within the boundaries of the Refuge historically provided spawning and nursery habitat for over thirty species of native fish in the Great Lakes. During the week of September 12th using both electro-fishing and seining a total of 46 different fish species were collected in the near-shore habitats of Lake Erie. More importantly, young-of-the-year age groups of the major sport fish species like walleye, large mouth bass, small mouth bass, northern pike, and other sunfishes were collected. One state listed species, the silver chub was collect as well. This effort is a critical first step in identifying the current status of fish species within the newly created Detroit River International Wildlife Refuge and will aid the refuge with establishing its Comprehensive Conservation Plan.

This effort provided a unique opportunity to create new partnerships with both governmental and non-governmental agencies to achieve common Great Lakes management objectives. Maintaining these collaborative relationships allows for the most efficient use of limited human and fiscal resources. This project is consistent with the “Partnerships and Accountability”, “Aquatic Species Conservation and Management”, and “Leadership in Science and Technology” focus areas of the Fisheries Program’s Vision for the Future.

Cooperation with Native Americans

Coded Wire Tag Extraction

*Submitted by Adam Kowalski
Fish and Wildlife Biologist*

During the month of October 2004, Fishery Biologist Adam Kowalski extracted and read coded-wire-tags (CWT) from lake trout. CWTs are microscopic metal tags placed in the snouts of

juvenile lake trout at the hatchery. Lake trout heads were collected during the spring fishery independent lake whitefish survey conducted by the Alpena FRO. Kowalski also extracted and read CWT from lake trout sampled by the Chippewa Ottawa Resource Authority (CORA).

CWTs are extracted by cutting lake trout snouts into smaller and smaller pieces until the tag can be seen and removed. CWTs are read under a microscope, and each tag's unique number is recorded. The tag number, when compared to stocking records, yields information such as stocking location, stocking date, fish age, fish strain, and hatchery of origin.

In total, Kowalski removed and read over 100 tags from approximately 125 heads. Not all adipose clipped lake trout contain CWTs, because some lake trout shed their tag and some are erroneously fin clipped. Additional lake trout heads will be received from Bay Mills Indian Community (BMIC), the Michigan DNR creel program, and the Alpena FRO fall surveys. These heads will be processed when received.

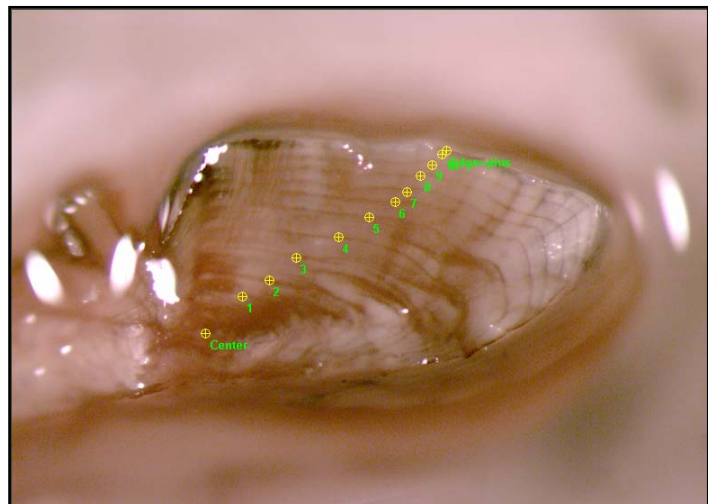
Data collected from lake trout CWTs are used to determine harvest limits, stocking locations, movement patterns, and post stocking survival rates of various hatchery practices. These outcomes are consistent with the Service's goal of building and maintaining self-sustaining populations of native fish species while providing recreational fishing opportunities and meeting the needs of tribal communities under the "Aquatic Species Conservation and Management" priority of the Fisheries Program Vision for the Future.

Leadership in Science and Technology

Lake Whitefish Age Determination

*Submitted by Scott Koproski
Fishery Biologist*

During the month of October, Fishery Biologist Scott Koproski began aging lake whitefish otoliths collected during the Lake Huron Lake Whitefish Distribution Study in 2004. This study is funded through the USFWS Restoration Act, and there are 7 agencies (USFWS, Michigan DNR, OMNR, CORA, Chippewas of Nawash First Nation, Saugeen First Nation, Bruce Power) tagging approximately 15,000 lake whitefish lakewide in each of 3 years to better delineate lake whitefish spawning stocks in Lake Huron.



Biologist Koproski began aging otoliths from lethal samples collected from the 2004 tagging activities using the "crack and burn" technique to identify annuli present within the otoliths. Two distinct growth patterns are identified using "crack and burn" analysis: broad summer growth and narrow winter growth. By counting the bands of winter growth, age estimates are

obtained from the otoliths. Biologist Koproski analyzed approximately 125 otolith samples collected in 2004. This represents approximately 1/3 of the lethal samples collected for this study.

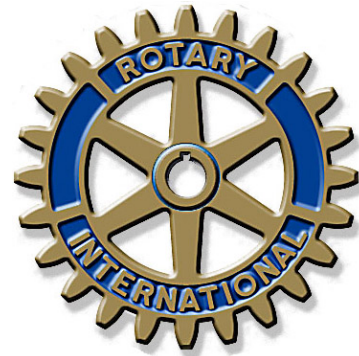
This work is an example of the Alpena FRO's commitment to the following Fishery Program Vision Priorities: Aquatic Species Conservation and Management, Partnerships and Accountability, and Cooperation with Native American Tribes.

Public Use

Service Biologist Addresses Local Rotary Club

*Submitted by Aaron Woldt
Fishery Biologist*

Fishery Biologist Aaron Woldt of the Alpena FRO was invited to speak at the October 11 meeting of the Rotary International Club of Alpena. Rotary International is an organization of business and professional leaders that provides humanitarian service, encourages high ethical standards, and helps build goodwill worldwide. Woldt gave a 20 minute long PowerPoint presentation describing the Service's mission, commitments, roles in Great Lakes resource protection, and current Alpena FRO projects including the following: 1) the annual fishery independent lake whitefish survey in 1836 Treaty waters; 2) the basin-wide Lake Huron lake whitefish tagging study; 3) the mid-lake lake trout assessments at Six Fathom Bank and Yankee Reef; 4) lake sturgeon tagging and tracking studies in Lake Huron and the Lake St. Clair corridor; 5) ANS monitoring and control efforts in Lake Huron; and 6) current Private Lands and Fish Passage work.



Approximately 60-70 local community members and businessmen and women attended the meeting. Woldt fielded questions from the floor regarding Alpena FRO operations and responsibilities, local fishing opportunities, and double crested cormorants. Woldt's presentation was well received, and many Rotary members expressed thanks for the high quality of information provided regarding local natural resources.

Giving presentations to civic groups like Rotary International allows Alpena FRO staff to meet and interact with large numbers of local community members to provide information about Service programs. This outcome is consistent with the Service's goal of implementing educational and outreach activities to educate public regarding Service activities under the "Public Use" and "Aquatic Species Conservation and Management" priority of the Fisheries Program Vision for the Future.

Alcona County Grade Schoolers Learn About Aquatic Nuisance Species

*Submitted by Susan Wells
Fishery Biologist*

On October 5, Biologist Wells presented information on Aquatic Nuisance Species (ANS) to 40 fourth grade students in Alcona County School District. The presentation included a preserved specimen of an adult sea lamprey along with plastimounts of round goby, Eurasian ruffe, and zebra mussels. These props allowed the students to become more involved with the presentation and increased their awareness of how these invasive species came to the Great Lakes and how they can harm the Great Lakes ecosystem. The students became aware of ways to prevent the spread of ANS and ways they can help educate others on the potential effects and the need to prevent the spread of ANS in the Great Lakes. The presentation was part of a larger program that included speakers from the U.S. Forest Service and U.S. Department of Agriculture educating the student on natural resources issues.



This accomplishment was an educational and outreach opportunity. We were able to showcase the Service and the Alpena FRO and educate young students on fishery needs in the Great Lakes. Approximately 40 students and 5 adults attended the event. This project addresses the Fisheries Vision priority for Public Use. It provides an outlet to educate and interact with youth groups on issues regarding Great Lakes aquatic resources.



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For more information on Alpena FRO programs and activities or to view other station reports visit our website located at <http://www.fws.gov/midwest/alpena/>.